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A photograph of several oil pumpjacks (jack-o'-lanterns) in silhouette against a bright orange sunset sky. The sun is low on the horizon, creating a strong glow and long shadows. The pumpjacks are scattered across the landscape, with some in the foreground and others in the distance. The overall scene is industrial and atmospheric.

## Fossil Carbon Emissions and Mitigation

Step It Up Jacksonville  
Saturday, April 14, 2007

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## IPCC Working Group III

- IPCC = Intergovernmental Panel on Climate Change
- Working Group III – Mitigation of Climate Change
- Report release: May 5, 2007

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## Many “General” Proposals

- 80% cuts by 2050
- Stabilize at 7 GtC by 2054



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## How do we begin?

- The BIG Picture
- US EPA annual national inventory
- Information on States and communities not included
- States and local governments must take lead

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## Macro to Micro

Local GHG inventories required:

1. To identify solutions that can be implemented quickly
2. To identify longer term problems in need of solutions

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## Local Benchmarking: Transportation

- = 41% of all Florida GHG emissions
- Gasoline = 19.37 lbs CO<sub>2</sub>/gallon
- Air Travel = 1.1 lbs CO<sub>2</sub>/passenger mile

*SOURCES: US EPA, Environmental Defense*

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## Local Benchmarking: Electricity

- = 51% of all Florida emissions
- Emissions in lbs CO<sub>2</sub>/kWh:
  - FPL 1.09 - 1.33
  - Florida 1.39
  - JEA 2.04 - 2.26

*SOURCES: EIA, JEA, FPL, FDEP*

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## Local Benchmarking: Electricity Fuel Mix

- Florida:
  - 38% natural gas, 13% nuclear, 17% oil, 28% coal & petroleum coke
- JEA:
  - 6% natural gas, 60% coal, 27% petroleum coke
- FPL:
  - 50% natural gas, 20% nuclear, 22% coal

*SOURCES: EIA, JEA, FPL*

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## Local Benchmarking: Electric Power Plants

- Emissions in lbs CO<sub>2</sub>/kWh:
  - Natural Gas 0.93 - 1.33
  - Coal & Coke 2.13 – 2.35
  - Solar, Biofuels, Nuclear 0.00

*SOURCES: EIA, FDEP*

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## Local Benchmarking: Non-Electric Home Use

- Natural Gas 12.06 lbs CO<sub>2</sub>/therm
- Heating Oil 22.38 lbs CO<sub>2</sub>/gallon
- Propane 12.67 lbs CO<sub>2</sub>/gallon

*SOURCES: EIA, US EPA*

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**\*\*\* *Thank You* \*\*\***

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